

**TABLE 2-1602
TR-2 TRANSITIONAL RESIDENTIAL-2 DISTRICT USE TABLE**

P = PERMITTED S = SPECIAL EXCEPTION

USE CATEGORY	USE TYPE	TR-2	ADDITIONAL REGULATIONS FOR SPECIFIC USES
RESIDENTIAL USES			
Household Living	Accessory dwelling (accessory to single family detached dwelling)	P	Section 5-613
	Dwelling, single-family detached, including manufactured housing	P	Manufactured housing subject to Section 5-620.
	Home occupation (accessory to single family detached dwelling)	P	Section 5-400
	Portable Dwelling/ Construction Trailer	P	
	Guest house (accessory to single family detached dwelling)	P	Section 5-612
Group Living	Congregate housing facility	S	
	Continuing care facility	S	
	Orphanage or similar institution	S	
	Monastery or convent	S	Section 5-656
	Tenant dwelling	P/S	Section 5-602
AGRICULTURAL USES			
Agriculture	General Use Category	P	Section 5-626
Horticulture	General Use Category	P	Section 5-626
Animal Husbandry	General Use Category	P	Section 5-626

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TR-2 TRANSITIONAL RESIDENTIAL-2 DISTRICT USE TABLE**

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USE CATEGORY	USE TYPE	TR-2	ADDITIONAL REGULATIONS FOR SPECIFIC USES
Agriculture Support and Services Directly Related to On-going Agriculture, Horticulture and Animal Husbandry Activity, On-Site	Animal care business	P	Section 5-627
	Custom operators	P	Section 5-627
	Direct market business for sale of products produced on-site including but not limited to PYO (pick-your-own)	P	Section 5-627
	Equestrian facilities	P	Section 5-627
	Equestrian facility, on lots of less than fifty (50) acres, or without frontage on a state maintained road	S	Section 5-627
	Farm co-ops	P	Section 5-627
	Farm based tourism events	P	Section 5-628
	Farm markets	P	Section 5-603
	Pet farms	P	Section 5-627
	Stables	P	Section 5-627
	Stable, neighborhood on lots less than twenty five (25) acres, or without frontage on a state maintained road	S	Section 5-627
	Wayside stand	P	Section 5-604
Animal Services	Veterinary service	P	
PUBLIC AND INSTITUTIONAL USES			
Day Care Facilities	Child care home	P	Section 5-609(A)
	Child or adult day care	S	Section 5-609(B)
Cultural and Governmental Facilities	Community center, HOA facilities only	P	
	Structures or uses for local government purposes not otherwise listed	S	

**TABLE 2-1602
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USE CATEGORY	USE TYPE	TR-2	ADDITIONAL REGULATIONS FOR SPECIFIC USES
Education	Colleges or Universities (including dorms)	S	
	School (elementary or middle), for fifteen (15) pupils or less	P	Section 5-655
	School (elementary, middle, or high), for more than 15 pupils	S	
	Seminary	S	
	Vocational school	S	
Park and Open Space	Cemetery	S	Section 5-637
	Mausoleum	S	Section 5-637
	Community, neighborhood, or regional park, passive recreational uses	P	
	Community, neighborhood, or regional park, active recreational uses	S	
	Wetlands mitigation bank	P	
Public Safety	Fire and/or rescue station	S	Section 5-638
	Police station or substation	S	Section 5-638
Religious Assembly	Church, synagogue, temple or mosque with seating capacity of 300 or less seats in sanctuary or main activity area	P	Section 5-639
	Church, synagogue, temple, or mosque with seating capacity of more than 300 in sanctuary or main activity area, or with accessory schools, day care centers, with more than 50 children, recreational facilities	S	Section 5-639
Utility	Communal sewer system	P	Section 5-621
	Communal water supply system	P	Section 5-621
	Public utility service center and storage yard	S	Section 5-621

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USE CATEGORY	USE TYPE	TR-2	ADDITIONAL REGULATIONS FOR SPECIFIC USES
	Public utility service center, without outdoor storage	P	Section 5-621
	Recycling drop off collection center, public	P	Section 5-607
	Recycling drop off collection center, private	S	Section 5-607
	Sewage and water treatment plant	S	Section 5-621
	Utility substation, dedicated	S	Section 5-621
	Utility substation, distribution	S	Section 5-616 and 5-621
	Utility substation, transmission	S	Section 5-616 and 5-621
	Utility transmission line, overhead (excluding connections of lines from public utility transmission lines to individual development sites)	S	Unless exempted by Section 1-103 (D)
	Utility transmission line, underground	P	
	Water storage tank	S	Section 5-621
	Sewage and water pumping station	P	Section 5-621
COMMERCIAL USES			
Recreation and Entertainment	Golf course	S	Section 5-648
	Private club or lodge	S	
Retail Sales and Service	Small business	P/S	Section 5-614
Visitor Accommodation	Bed and breakfast homestay	P/S	Section 5-601(A)
	Bed and breakfast inn	S	Section 5-601(B)
INDUSTRIAL USES			
Telecommunication Facilities	Radio and/or television tower	S	Section 5-618

TABLE 2-1602 TR-2 TRANSITIONAL RESIDENTIAL-2 DISTRICT USE TABLE			
P = PERMITTED S = SPECIAL EXCEPTION			
USE CATEGORY	USE TYPE	TR-2	ADDITIONAL REGULATIONS FOR SPECIFIC USES
	Telecommunications antenna	P	Section 5-618(A)
	Telecommunications monopole	P	Section 5-618(B)(1)
	Telecommunications monopole	S	Section 5-618(B)(2)
	Telecommunication tower	S	Section 5-618(C)(2)

2-1603 Development Standards.

(A) **General.** All development in the TR-2 district, unless exempted pursuant to Section 2-1603 (B) shall be developed consistent with Section 5-701 (TR Districts Lot Standards) and 6-2000 (Conservation Design).

(B) **Exemptions.** The development of a lot existing on the date of adoption is exempted from the standards and requirements of Section 5-701 (TR Districts Lot Standards). The development of such lot shall be subject to the development standards of Table 2-1603(B).

TABLE 2-1603(B): TR-2 BUILDING REQUIREMENTS FOR EXISTING LOTS (Lots Existing Prior to January 7, 2003)	
Minimum Required Yards	No building shall be located within 25 feet of any property line nor within 100 feet from the right-of-way of any arterial road, 75 feet from the right-of-way of any collector road, and 35 feet from any other road right-of-way, private access easement, and any prescriptive easement.
Maximum Floor Area Ratio	0.05
Maximum Building Height	35 feet. No restriction for buildings used exclusively for agriculture, horticulture and animal husbandry.

1 **Section 2-1700 TR-1 (Transitional Residential - 1)**

2 **2-1701 Purpose and Intent.**

3 (A) The purpose and intent of the TR-1 districts is to:

- 4 (1) Create a visual/spatial transition between the suburban area and the rural
5 area of the County;
- 6 (2) Achieve a blend of rural and suburban development;
- 7 (3) Encourage new development designs that incorporate both suburban and
8 rural features;
- 9 (4) Achieve a balance between the built and natural environment;
- 10 (5) Protect and integrate open space and natural resources; and
- 11 (6) Implement requirements that open space be provided in conjunction with
12 ~~the conservation design and other~~ standards of this Ordinance.

13 **2-1702 Use Regulations.** Table 2-1702 summarizes the principal use regulations of the TR-1
14 districts.

15 (A) **Organization of Use Table.** Table 2-1702 organizes the uses in the TR-1
16 districts by Use Classifications, Use Categories and Use Types.

- 17 (1) **Use Classifications.** The Use Classifications are: residential uses;
18 agricultural uses; public and institutional uses; commercial uses; and
19 industrial uses. The Use Classifications provide a systematic basis for
20 assigning present and future land uses into broad general classifications
21 (e.g., residential uses and agricultural uses). The Use Classifications then
22 organize land uses and activities into general "Use Categories" and
23 specific "Use Types" based on common functional, product, or physical
24 characteristics, such as the type and amount of activity, the type of
25 customers or residents, how goods or services are sold or delivered, and
26 site conditions.
- 27 (2) **Use Categories.** The Use Categories describe the major sub-groups of the
28 Use Classification, based on common characteristics (e.g., the residential
29 Use Classification is divided into two major Use Categories: Household
30 Living and Group Living). Principal uses are identified in defining the Use
31 Category. They are principal uses that most closely share the common
32 characteristics that are key to the Use Category.

(3) **Use Types.** The Use Categories are then divided into specific Use Types. The specific Use Types are included in the respective Use Category. They identify the specific uses that are considered to fall within characteristics identified in the Use Category. For example, single family detached dwellings, multi-family dwellings and town houses are Use Types in the Household Living Use Category.

(B) **Use Categories and Use Types Defined.** All the Use Categories and Use Types listed in Table 2-1702 are defined in Article VIII (Definitions).

(C) **Permitted and Special Exception Uses.** A "P" in the column identified "TR-1" indicates that a Use Category or specific Use Type is permitted as a matter of right (as a permitted use) in the TR-1 districts, subject to compliance with all applicable standards and regulations in this Ordinance and all other county ordinances. An "S" indicates that a Use Type is allowed in the TR-1 districts as a special exception in accordance with the procedures and standards of Section 6-1300. In some instances and based on the Additional Regulations for Specific Uses (Section 5-600), a Use Type will be permitted as a matter of right under certain conditions or allowed as a special exception under other conditions. In those instances, it is identified as "P/S."

(D) **Reference to General Use Category.** References to "General Use Category" under the Use Type column, means all of the uses in the Use Category are allowed. The Use Categories are defined in Article VIII. Where specific Use Types are listed in the Use Type column, only the listed Use Types in the Use Category are allowed. The Use Types are defined in Article VIII.

(E) **Additional Regulations for Specific Uses.** References to sections in the final column of Table 2-1702 (Additional Regulations for Specific Uses) indicate that the listed use is subject to use-specific regulations. The numbers provide a cross-reference to the "Additional Regulations for Specific Uses" in Section 5-600. All the Use Categories and Use Types listed in Table 2-1702 are defined in Article VIII (Definitions).

**TABLE 2-1702
TR-1 TRANSITIONAL RESIDENTIAL-1 DISTRICTS USE TABLE**

P = PERMITTED S = SPECIAL EXCEPTION

USE CATEGORY	USE TYPE	TR-1 UBF	TR-1 LF	ADDITIONAL REGULATIONS FOR SPECIFIC USES
RESIDENTIAL USES				
Household Living	Accessory dwelling (accessory to single family detached dwelling)	P	P	Section 5-613
	Dwelling, single- family detached, including manufactured housing	P	P	Manufactured housing subject to Section 5-620.
	Home occupation (accessory to single family detached dwelling)	P	P	Section 5-400
	Portable Dwelling/ Construction Trailer	P	P	
	Guest house (accessory to single family detached dwelling)	P	P	Section 5-612
Group Living	Congregate housing facility	S	S	
	Continuing care facility	S	S	
	Orphanage or similar institution	S	S	
	Monastery or convent	S	S	Section 5-656
	Tenant dwelling	P/S	P/S	Section 5-602
AGRICULTURAL USES				
Agriculture	General Use Category	P	P	Section 5-626
Horticulture	General Use Category	P	P	Section 5-626
Animal Husbandry	General Use Category	P	P	Section 5-626

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USE CATEGORY	USE TYPE	TR-1 UBF	TR-1 LF	ADDITIONAL REGULATIONS FOR SPECIFIC USES
Agriculture Support and Services Directly Related to On-going Agriculture, Horticulture and Animal Husbandry Activity, On-Site	Animal care business	P	P	Section 5-627
	Custom operators	P	P	Section 5-627
	Direct market business for sale of products produced on-site - including but not limited to PYO (pick-your- own)	P	P	Section 5-627
	Equestrian facilities	P	P	Section 5-627
	Equestrian facilities, on lots of less than fifty (50) acres, or without frontage on a state maintained road	S	S	Section 5-627
	Farm co-ops	P	P	Section 5-627
	Farm based tourism	P	P	Section 5-628
	Farm markets	P	P	Section 5-603
	Pet farms	P	P	Section 5-627
	Stables	P	P	Section 5-627
	Stable, neighborhood on lots less than twenty five (25) acres, or without frontage on a state maintained road	S	S	Section 5-627
	Wayside stand	P	P	Section 5-604
Animal Services	Veterinary service	P	P	

**TABLE 2-1702
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P = PERMITTED S = SPECIAL EXCEPTION

USE CATEGORY	USE TYPE	TR-1 UBF	TR-1 LF	ADDITIONAL REGULATIONS FOR SPECIFIC USES
PUBLIC AND INSTITUTIONAL USES				
Day Care Facilities	Child care home	P	P	Section 5-609(A)
	Child or adult day care	S	S	Section 5-609(B)
Cultural and Governmental Facilities	Community center, HOA facilities only	P	P	
	Structure or uses for local government purposes not otherwise listed in district	S	S	
Education	Colleges or universities (including dorms)	S	S	
	School (elementary or middle), for fifteen (15) pupils or less	P	P	Section 5-655
	School (elementary, middle, or high), for more than 15 pupils	S	S	
	Seminary	S	S	
	Vocational school	S	S	
Park and Open Space	Cemetery	S	S	Section 5-637
	Mausoleum	S	S	Section 5-637
	Crematorium	S	S	Section 5-637
	Community, neighborhood, or regional park, passive recreational uses	P	P	
	Community, neighborhood, or regional park, active recreational uses	S	S	
	Wetland mitigation bank	P	P	

**TABLE 2-1702
TR-1 TRANSITIONAL RESIDENTIAL-1 DISTRICTS USE TABLE**

P = PERMITTED S = SPECIAL EXCEPTION

USE CATEGORY	USE TYPE	TR-1 UBF	TR-1 LF	ADDITIONAL REGULATIONS FOR SPECIFIC USES
Public Safety	Fire and/or rescue station	S	S	Section 5-638
	Police station or substation	S	S	Section 5-638
Religious Assembly	Church, synagogue, temple or mosque with seating capacity of 300 or less seats in sanctuary or main activity area	P	P	Section 5-639
	Church, synagogue, temple, or mosque with seating capacity of more than 300 in sanctuary or main activity area, or with accessory schools, day care centers with more than 50 children, recreational facilities	S	S	Section 5-639
Utility	Communal sewer system	P		Section 5-621
	Communal water supply system	P		Section 5-621
	Public utility service center and storage yard	S	S	Section 5-621
	Public utility service center, without outdoor storage	P	P	Section 5-621
	Recycling drop off collection center, public	P	P	Section 5-607
	Recycling drop off collection center, private	S	S	Section 5-607
	Sewage and water treatment plant	S	S	Section 5-621
	Utility substation, dedicated	P	P	Section 5-621
	Utility substation, distribution	S	S	Section 5-616 and 5-621
	Utility substation, transmission	S	S	Section 5-616 and 5-621

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**TABLE 2-1702
TR-1 TRANSITIONAL RESIDENTIAL-1 DISTRICTS USE TABLE**

P = PERMITTED S = SPECIAL EXCEPTION

USE CATEGORY	USE TYPE	TR-1 UBF	TR-1 LF	ADDITIONAL REGULATIONS FOR SPECIFIC USES
	Utility transmission line, overhead (excluding connections of lines from public utility transmission lines to individual development sites)	S	S	Unless exempted by Section 1-103(D)
	Utility transmission line, underground	P	P	
	Water storage tank	S	S	Section 5-621
	Water and sewer pumping station	P	P	Section 5-621
COMMERCIAL USES				
Recreation and Entertainment	Golf course	S	S	Section 5-648
	Private club or lodge	S	S	
Retail Sales and Service	Small business	P/S	P/S	Section 5-614
Visitor Accommodation	Bed and breakfast homestay	P/S	P/S	Section 5-601(A)
	Bed and breakfast inn	S	S	Section 5-601(B)
INDUSTRIAL USES				
Telecommunication Facilities	Radio and/or television tower	S	S	Section 5-618
	Telecommunications antenna	P	P	Section 5-618(A)
	Telecommunications monopole	P	P	Section 5-618(B)(1)
	Telecommunications monopole	S	S	Section 5-618(B)(2)
	Telecommunication tower	S	S	Section 5-618(C)(2)

1 **2-1703 Development Standards.**

2 (A) **General.** All development in the TR-1 districts, unless exempted pursuant to
3 Section 2-1703(B) shall be developed consistent with Section 5-701 (TR Districts
4 Lot Standards) and 6-2000 (Conservation Design).

5 (B) **Exemptions.** The development of a lot existing on January 7, 2003 is exempted
6 from the standards and requirements of Section 5-701 (TR Districts Lot
7 Standards). The development of such lot shall be subject to the development
8 standards of Table 2-1703(B).

TABLE 2-1703(B): TR-1 BUILDING REQUIREMENTS FOR EXISTING LOTS (Lots Existing Prior to January 7, 2003)	
Minimum Required Yards	No building shall be located within 25 feet of any property line nor within 100 feet from the right-of-way of any arterial road, 75 feet from the right-of-way of any collector road, and 35 feet from any other road right-of-way, private access easement, and any prescriptive easement.
Maximum Floor Area Ratio	0.05
Maximum Building Height	35 feet. No restriction for buildings used exclusively for agriculture, horticulture and animal husbandry.

1 **Section 4-1500 FOD - Floodplain Overlay District**

2
3 **4-1501**

4 **Purpose and Intent.** These provisions are created to regulate and restrict land use
5 in areas within the County which are subject to severe periodic inundation, in such
6 a manner as to: (1) protect life and prevent or minimize property damage; (2)
7 reduce public costs for flood control, rescue and relief efforts occasioned by
8 unwise use or occupancy of such areas; (3) conserve the natural state of
9 watercourses and watersheds, and minimize the damaging effects which
10 development has on drainage conditions, pollution of streams, and other
11 environmental impacts on the County's water sources; (4) comply with Federal and
12 State laws and regulations that address the need for floodplain management and
13 protection; and (5) qualify Loudoun residents for the insurance and subsidies
14 provided by the National Flood Insurance Program. Only those uses set forth in
15 Section 4-1505 and 4-1506 shall be permitted by right or special exception within
16 the Floodplain Overlay District, and land so encumbered may be used in a manner
17 permitted in the underlying district only if and to the extent such use is also
18 permitted in the overlay district.

19 **4-1502**

20 **Authority.** Authority for these provisions includes:

- 21 (A) Flood Damage Reduction Act, Va. Code Sections 62.1-44.108 et seq.
22
23 (B) Chapter 11, Title 15.1, Code of Virginia (Planning, Subdivision of Land
24 and Zoning).
25
26 (C) Soil Conservation Districts Law, Va. Code Sections 21-2(c), 21-2(d).
27
28 (D) Virginia Environmental Quality Act, Va. Code Section 10-178.
29
30 (E) Erosion and Sediment Control Act, Va. Code Section 21-89.2.
31
32 (F) Potomac River Basin Compact, Va. Code Section 62.1-69.1.
33
34 (G) National Flood Insurance Act of 1968, 42 U.S.C. 4001 et seq.
35

36 **4-1503**

37 **Definitions.** Unless otherwise specially provided, or unless clearly required by the
38 context, the words and phrases defined in this subsection shall have the following
39 meanings when used in Section 4-1500.

- 40 (A) **Alteration.** A development action which will change the cross section
41 of the floodplain and will increase either the erosive velocity or height
42 of floodwaters either on-site or off-site. Alterations include, but are not

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1 limited to, land disturbing activities such as clearing, grading,
2 excavating, transportation and filling of land.

3
4 (B) **Base Flood.** The flood having a one (1) percent chance of being equalled
5 or exceeded in any given year. Also known as the 100-year flood.

6
7 (C) **Cross section.** Shape and dimensions of a channel and valley of the
8 floodplain perpendicular to the line of flow.

9
10 (D) **Floodplain.** Any land area susceptible to being inundated by water from
11 the base flood and having a drainage area greater than one hundred (100)
12 acres. For purposes of regulation under this Ordinance, a distinction is
13 made between floodplains in watersheds of greater than 640 acres, and
14 those in watersheds of less than 640 acres.

15
16 (E) **Road, Crossing of the Floodplain.** Any improved right-of-way
17 traversing a floodplain generally perpendicular to the flow of the
18 drainageway. Driveways serving one (1) lot shall not be considered road
19 crossings.

20
21 (F) **Stormwater Management Improvements.** Surface drainage
22 improvements, storm sewers, detention and retention ponds and other
23 such improvements as required under authority of the Loudoun County
24 Erosion Control Ordinance and Plan, Chapter 1220 of the Loudoun
25 County Code.

26
27 (G) **Utility Lines in the Floodplain.** Storm sewers, sanitary sewers, water
28 lines and similar lines running generally parallel and perpendicular to the
29 flow of the drainageway; and other public utility lines traversing a
30 floodplain generally perpendicular to the flow of the drainageway.

31
32 **4-1504 Administration.**

33
34 (A) The sources of delineation of the floodplain shall include, but shall not be
35 limited to:

- 36
37 (1) Flood Insurance Study of Loudoun County, Virginia, unin-
38 corporated areas by the Federal Emergency Management
39 Agency (FEMA) (November, 1985, as amended) (This study
40 shall represent the minimum identification of the floodplain.
41 Any changes to the Flood Insurance Rate Map data contained in
42 this study shall have the prior approval of the Federal Insurance
43 Administration);
44

- (2) Flood hazard studies by USDA-Soil Conservation Service;
- (3) Floodplain studies by other Federal agencies such as the Corps of Engineers or the U.S. Geological Survey (USGS);
- (4) Detailed site-specific floodplain studies conducted by consulting engineering firms or government agencies;
- (5) For the Potomac River, the flood of 1936 known elevations along with a hydraulic gradient established by past flood events and ground topography; and
- (6) For the main stem of the Broad Run, from the Potomac River to the confluence of the North and South Forks, The Floodplain Study of the Broad Run Watershed, prepared by GKY and Associates, Inc. dated December 1990, as amended.

(B) The watershed map of Loudoun County shall show the approximate floodplain elevations and boundaries of watersheds greater than 100 acres and of watersheds greater than 640 acres. The Zoning Administrator, in consultation with the Director of Environmental Resources, is charged with making necessary cartographic interpretations of those maps.

(C) The provisions of this Section shall apply to all land within a floodplain. As used in this Section 4-1500, "floodplain" refers to certain areas whose boundaries are determined and can be located on the ground by reference to the definition of that term. The boundaries of the floodplain as shown on the Floodplain Map of Loudoun County are intended to correspond to the actual physical location of the floodplain. The Zoning Administrator, in consultation with the Director of Environmental Resources, is authorized to make necessary interpretations as to the exact location of the boundaries of floodplains if there appears to be a conflict between the mapped floodplain boundary, elevations and actual physical conditions. Such interpretations may be appealed to the Board of Zoning Appeals in accordance with the provisions of Section 6-1700. The Zoning Administrator may require information from any applicant, including, but not limited to a topographic survey and/or an engineering study of the floodplain in conformance with the provisions of the Facilities Standards Manual.

4-1505

Permitted Uses. The following uses, having a low flood damage potential and causing no obstruction of flood flows, shall be permitted within the Floodplain Overlay District. Uses allowed in the underlying district shall be prohibited to the extent not permitted by right or by special exception in the Floodplain Overlay District. Where any uses, structures or improvements will result in an alteration to

1 the floodplain, applications for alterations must be submitted to the Zoning
2 Administrator in accordance with subsection 4-1508, and any alteration must meet
3 the criteria contained in that subsection.
4

5 (A) Permitted uses in the floodplain of streams draining greater than 640
6 acres.
7

8 (1) Agricultural uses such as general farming, pasture, grazing,
9 outdoor plant nurseries, horticulture, wildcrop harvesting,
10 vegetable gardens, truck farming and sod farming. In addition,
11 timber harvesting is permitted upon submission of a Timber
12 Management Plan that has been approved by the Virginia
13 Division of Forestry.
14

15 (2) Fishery uses such as fish hatcheries, fish harvesting.
16

17 (3) Public or private recreational uses such as golf courses and
18 driving ranges, archery ranges, picnic grounds, wildlife and
19 nature preserves, target ranges, trap and skeet ranges, hunting
20 and fishing areas, swimming areas (except for swimming pools)
21 hiking and horseback riding trails, play areas of a natural,
22 permeable nature, including ball fields and polo fields, and other
23 similar park and open space uses. Tennis courts, basketball
24 courts, and similar type courts are permitted provided
25 impervious surfaces do not exceed three percent (3%) of the
26 floodplain within the development, and are not located within
27 the floodway.
28

29 (4) Stormwater management improvements associated with uses
30 permitted by right or special exception in the Floodplain
31 Overlay District.
32

33 (5) Utility lines, road crossings, private drives, serving up to seven
34 (7) lots and private access easements serving low density
35 development, and Private Lanes serving up to twenty-five (25)
36 lots in the A-25 District as provided for in Section 2-107.
37

38 (6) Repair, reconstruction or improvement of existing residences, so
39 long as the footprint of the existing residence is not increased
40 and is not considered a substantial improvement. "Substantial
41 Improvement" means any repair, reconstruction or improvement

the cost of which equals or exceeds fifty percent (50%) of the market value of the existing structure either (a) before the improvement or repair is started, or (b) if the structure has been damaged and is being restored, before the damage has occurred, regardless of the actual repair work performed.

- (7) Parking areas accessory to uses permitted by right or special exception in Floodplain Overlay District.
- (8) Incidental structures, not exceeding 840 square feet of floor area, associated with permitted or approved special exception uses in the Floodplain Overlay District. Such structures include storage sheds, maintenance sheds, backstops, bath houses and locker rooms. Provided, however, bulk storage of gasoline, chemicals, fuels or similar substances are prohibited in the Floodplain Overlay District.
- (9) Temporary storage of material or equipment necessary in the construction of uses or structures permitted by right or special exception in the Floodplain Overlay District.
- (10) Alterations of the floodplain associated with any permitted or special exception uses in the Floodplain Overlay District. However, no channelization shall occur except to protect existing habitable structures subject to periodic flooding. Applications for alterations of the floodplain must be submitted in accordance with Section 4-1508. To the extent that the elevations and boundaries of the floodplain change as a result of the alteration action, any areas no longer within the floodplain may be used for any use in the underlying district, subject to the provisions of the applicable district regulations and conditions of any approved special exception.
- (11) Restoration and rehabilitation of historic structures included or eligible for inclusion on a federal, state or local historic register.
- (12) Road crossings subject to the procedures and standards in Section 4-1508. If such a development action results in an off-site increase in the water surface elevation of the base flood as shown on the Floodplain Map of Loudoun County, it is subject to the following criteria and provisions:

- 1 (a) The procedures and standards for alterations in Section 4-
2 1508 shall apply; provided, however, the proposed
3 crossing may result in a rise in the water surface elevation
4 of the base flood of no more than one (1) foot.
5
6 (b) The proposed crossing must be a feature shown on the
7 Comprehensive Plan.
8
9 (c) A floodplain alteration in accordance with the Facilities
10 Standards Manual shall be submitted delineating all
11 increases in the base flood, and the new floodplain limits
12 shall be approved by FEMA, where a FEMA designated
13 floodplain or floodway will be altered. There shall be no
14 increase allowed by FEMA in the base flood elevation
15 within FEMA designated floodway.
16
17 (d) The road crossing shall be designed and constructed in
18 accordance with the standards and regulations of the
19 Virginia Department of Transportation and/or the FSM,
20 whichever shall apply.
21
22 (e) An instrument describing the increase in the floodplain
23 limits, and executed by each affected property owner,
24 shall be recorded upon approval of the alteration for the
25 road crossing.
26
27 (f) The proposed crossing shall not result in an increase in the
28 water surface elevation of the base flood affecting existing
29 buildings and structures.
30
31 (g) Affected off-site property owners may at any time
32 mitigate impacts on their land as a result of an increase in
33 the water surface elevation of the base flood by:
34
35 (i) Including all, or a portion of, the land subject to the
36 increase in the base flood elevation for purposes of
37 calculating the permitted density or intensity of use
38 on the lot subject to such increase; and/or
39
40 (ii) Alterations in accordance with Section 5.440B of the
41 Facilities Standards Manual to reclaim that portion
42 of their land subject to the increase in water surface

elevation of the base flood as a result of the road crossing, provided there is no additional offsite rise in the 100-year water surface elevation; or

(iii) An affected landowner may request the following by special exception granted by the Board of Supervisors, in accordance with Section 4-1506 of the Zoning Ordinance, in conjunction with subsection 4-1505(A)(12)(g)(i):

(a) Adjustment of the building setback or parking setback requirements on specific lots or parcels of land affected by the increase in the elevation of the base flood; and/or

(b) Allocation of the density provided for in subsection 4-1505(A)(12)(g)(i) to other lots within the proposed development not directly subject to the increase in the base flood elevation. This provision is in addition to other density transfer provisions established by the Loudoun County Zoning Ordinance.

(13) Municipal drinking water supply reservoir.

(B) Permitted uses in the floodplain of streams draining less than 640 acres.

(1) Uses allowed under Section 4-1505(A).

(2) Alterations. Applications for alterations whether or not associated with a permitted or special exception use must be submitted in accordance with Section 4-1508 and any alteration must meet the criteria contained in that section. To the extent that the boundaries of the floodplain change as a result of the alteration, any areas no longer within the floodplain may be used for any use in the underlying district, subject to the provisions of the applicable district regulations and conditions of any approved special exception.

(3) Stormwater management improvements whether or not associated with uses permitted by right or special exception in the Floodplain Overlay District.

(4) Farm ponds designed by the Soil Conservation Service.

(5) Basketball or tennis courts, and swimming pools.

(6) Parking areas less than 5,000 square feet not otherwise permitted. Such parking areas shall not be subject to 100-year flooding greater than one foot in depth, shall be equipped with best management practices maintained by the property owner, and shall not require major fill.

4-1506

Special Exception Uses. The following uses and structures may be permitted in the floodplain by the Board of Supervisors by special exception, subject to Section 6-1300 and subsection 4-1507.

(A) Marinas, boat rentals, docks, piers, wharves, water ski jump facilities, and incidental structures associated with such uses, such as bath houses and locker rooms.

(B) Carnivals, circuses and similar transient amusement enterprises.

(C) Riding stables.

(D) Structures or uses required for the operation of a public utility, road crossings and stormwater management improvements not otherwise permitted by this Ordinance; provided, however, that stormwater management ponds shall not be allowed in floodplains in watersheds of greater than 640 acres, except as provided in paragraph (E), below.

(E) Those roads, as permitted under the provisions of the Zoning Ordinance and Land Subdivision and Development Ordinance, and ponds in the Potomac River floodplain. Due to the extensive watershed drained by the Potomac River in the States of Virginia, Maryland, and Pennsylvania, the Potomac River floodplain is unique in comparison to all other floodplains in Loudoun County. The Potomac River floodplain located in Loudoun County does not represent a significant portion of the entire Potomac floodplain, and accordingly, these less restrictive use regulations will apply to that area.

(F) Incidental structures, greater than 840 square feet of floor area, associated with uses permitted by right or special exception in the Floodplain Overlay District.

4-1507

Standards For A Special Exception. In considering applications for a special exception, the Board of Supervisors must be satisfied that the following standards and those of Section 6-1300 have been met:

- 1 (A) The proposed use will not increase the danger to life and property due to
2 increased flood heights or velocities.
3
4 (B) The proposed use will not increase the danger that materials may be
5 swept downstream to the injury of others.
6
7 (C) The proposed water supply and sanitation systems are designed to
8 prevent disease, contamination, and unsanitary conditions.
9
10 (D) The proposed use or structure must be located and designed to limit its
11 susceptibility to flood damage, and available alternative locations, not
12 subject to flooding, for the proposed use must be considered.
13
14 (E) The proposed use is compatible with existing and planned development.
15
16 (F) The proposed use is in harmony with the comprehensive plan.
17
18 (G) The expected heights, velocity, duration, rate of rise and sediment
19 transport of the flood waters expected at the site should not cause
20 significant damage.
21

22 **4-1508**

Alterations.

- 23
24 (A) **Procedures for Alterations to the Floodplain.** Applications for
25 alterations to the floodplain shall be subject to the following procedures:
26
27 (1) A Type I floodplain alteration application shall be submitted
28 concurrently with Construction Plans and Profiles,
29 preliminary/record plat, record plat, final site plan, or
30 subdivision waiver applications. A Type II floodplain alteration
31 application shall be submitted after preliminary subdivision or
32 preliminary site plan approval. Approval of floodplain
33 alteration applications will be required prior to approval of
34 construction plans and profiles, record plats, or final site plans,
35 whichever comes first.
36
37 (2) The applicant shall submit to the Zoning Administrator detailed
38 studies in accordance with Section 5.400 of the Facilities
39 Standards Manual.
40
41 (3) The Zoning Administrator shall refer the submitted studies to
42 the appropriate agencies for review and recommendations based
43 on Subsection 4-1508(B), below. The Zoning Administrator

1 shall notify the Virginia Water Control Board and the Federal--
2 Emergency Management Agency and any adjacent community
3 which may be impacted prior to the approval of any alteration or
4 relocation of a watercourse that is designated as a FEMA
5 floodplain or floodway.
6

- 7 (4) Following review of the application, the Zoning Administrator
8 shall approve or disapprove the application and notify the
9 applicant.
10

11 (B) **Engineering and Environmental Criteria for Proposed Alterations to**
12 **the Floodplain.** All proposed alterations to the floodplain shall be
13 reviewed by the Zoning Administrator, in consultation with appropriate
14 agencies, to determine whether the following criteria have been met:
15

- 16 (1) Alterations to the floodplain shall result in no off-site increase in
17 the water surface elevation of the base flood, except as
18 otherwise provided for in Section 4-1505(A)(12). Alterations in
19 the floodway shall result in no rise in the water surface elevation
20 of the base floodplain consisting of the water channel and
21 overbank areas capable of conveying the deep and fast moving
22 water discharge of the base flood as defined in the Federal
23 Emergency Management Agency Flood Insurance study.
24
- 25 (2) Alterations to the floodplain shall not create erosive water
26 velocity on or off-site (where erosive water velocity is based on
27 analysis of the surface material and permissible velocities for
28 specific cross sections affected by the proposed alteration, using
29 standard engineering tables as a general guide), and the mean
30 velocity of stream flow at the downstream end of the site after
31 alteration shall be no greater than the mean velocity of the
32 stream flow under existing conditions.
33
- 34 (3) Relocation or alteration of the natural stream channel shall not
35 be permitted on streams that drain greater than 640 acres.
36 Relocation or alteration proposals for streams that drain less
37 than 640 acres shall include a stream rehabilitation program
38 depicted on a floodplain alteration plan.
39
- 40 (4) The maximum allowable slope of any filled area on the
41 floodplain alteration plan shall be 2:1.

(5) The floodplain alteration plan shall further include plans for erosion control of cut and fill slopes and restoration of excavated areas. The site plan should incorporate the use of natural materials (earth, stone, wood) on cut and fill slopes and provide for tree protection.

(6) Alterations to the floodplain shall be in conformance with the provisions of Chapter 1220 of the Codified Ordinances of Loudoun County and the Erosion and Sediment Control Law, Va. Code Section 21-89.1 et seq.

(7) The flood carrying capacity within the altered floodplain shall be maintained.

4-1509 Grading Plans and Construction Plans and Profiles Required.

(A) Grading plans and/or construction plans and profiles are required for all uses in the floodplain overlay district, except for agricultural, forestry or fisheries uses not requiring the erection of structures. Alterations may be approved as part of either a subdivision or site plan application, or grading plan.

(B) All structures built in the Floodplain Overlay District must conform to the requirements of the Uniform Statewide Building Code, including the floodproofing provisions of that code.

4-1510 Floodplain Information To Be Submitted With Land Development Actions. Floodplain information shall be included as part of rezoning, special exception, commission permit and site plan applications, and other land development applications, in accordance with Chapter 5 of the Facilities Standards Manual.

4-1511 Density Calculations. For purposes of calculating the permitted floor area and number of residential units in the underlying zoning district, the land area in any portion of the Floodplain Overlay District shall be treated as follows:

(A) Any portion of the Floodplain Overlay District in a watershed of a stream draining less than 640 acres shall be included as part of the land area for such calculations.

(B) Except to the extent permitted in approved County Flood Plain Studies, any portion of the regulatory floodplain within the Floodplain Overlay District in a watershed of 640 or more acres shall be excluded as part of the land area for such calculations.

A124

Note: No amendments are proposed to the MDOD text.
This text reflects the regulations as they currently exist and are provided for reference.

Section 4-1600

MDOD - Mountainside Development Overlay District

4-1601

Purpose and Intent. These provisions are created to regulate land use and development on the mountainsides of the County, in such a manner as to provide for low density residential development in remote areas and to: (1) assure mountainside development will not result in substantial damage to significant natural resource areas, wildlife habitats or native vegetation areas; (2) assure that mountainside development is compatible with the slope of the land; (3) assure proper design is utilized in grading and in the development of structures, roadways and drainage improvements; (4) assure mountainside conditions are properly identified and incorporated into the planning process for subdivision and site development; (5) prevent erosion and minimize clearing and grading; (6) ensure that all development is compatible with the existing topography and soils conditions; and (7) implement the intent of the Comprehensive Plan.

4-1602

Mountainside Development Overlay District Established

- (A) The Mountainside Development Overlay District is hereby established as an overlay district, meaning that this district is overlaid upon other districts and the land so encumbered may be used in a manner permitted in the underlying district only if and to the extent such use is also permitted in the overlay district.
- (B) Mountainsides will be defined by the presence of certain natural features such as elevation, forests, steep slopes, unstable soils, and groundwater recharge areas that are commonly associated with these areas.
- (C) The limits of this district shall be shown on the Loudoun County Mountainside Protection Area Map, which is adopted as a part of this Ordinance. The Zoning Administrator is charged with making necessary cartographic interpretations of that map with recommendation and referral from the County Soil Scientist.
- (D) The following categories of mountainside area are established within the Mountainside Development Overlay District as shown on the Mountainside Protection Area Map:
 - (1) **Somewhat Sensitive Areas.** Areas with potentially slight or limited environmental and/or public safety impacts from development.
 - (2) **Sensitive Areas.** Areas with moderate environmental and/or public safety impacts from development.

A-125

- (3) **Highly Sensitive Areas.** Areas with potentially severe environmental and/or public safety impacts from development.

4-1603

Uses in the Mountainside Development Overlay District.

- (A) **Permitted Uses.** All uses and structures permitted by right in the underlying zoning district are permitted subject to the performance standards listed in Section 4-1604, except that permitted uses involving land disturbing activity in highly sensitive areas shall meet the criteria of Section 4-1605 and shall require special exception approval granted in accordance Section 6-1300 of this ordinance prior to issuance of a zoning permit.
- (B) **Special Exception Uses.** All uses and structures permitted by special exception in the underlying zoning district may be permitted subject to the performance standards listed in Section 4-1604, except that special exception uses involving land disturbing activity in highly sensitive areas shall meet the criteria set forth in Section 4-1605 and shall require special exception approval granted in accordance with Section 6-1300 of this ordinance prior to issuance of a zoning permit.
- (C) **Exemptions.** Agricultural, horticultural, forestry, or silvicultural uses are exempt from the application of the performance standards in Sections 4-1604 and 4-1605 except that, (1) agricultural operations shall be conducted only in conformance with a Farm Management Plan approved by the Loudoun County Soil and Water Conservation District, and (2) timber harvesting shall be conducted only in conformance with a plan approved by the Virginia Division of Forestry. Furthermore, any addition to a single family detached dwelling which existed within a highly sensitive area prior to October 4, 1995 shall be permitted by right, subject to the criteria in Sections 4-1604 and 4-1605, and provided that such addition does not increase the total floor area of the dwelling, as existed on October 4, 1995, by more than fifty percent (50%).
- (D) The uses described in and subject to Article I Section 1-404(B)(2) are exempted from the special exception requirements, subject to obtaining an approved "Location Clearance Permit" from the Zoning Administrator or his/her designee, accompanied by as much information as the Zoning Administrator deems pertinent and such additional information as the Zoning Administrator may require to approve such "Location Clearance Permit."

4-1604

Performance Standards in Somewhat Sensitive and Sensitive Areas. All uses and structures permitted by right or special exception in Somewhat Sensitive and Sensitive Areas of the Mountainside Development Overlay District, shall comply with the following standards:

- (A) In somewhat sensitive areas, land disturbing activities exclusive of house, driveway, drainfield and wells shall be permitted subject to the following:

- (1) Selective clearing, to the extent necessary to locate the use, of up to fifty percent (50%) of forestal areas on existing slopes less than fifteen percent (15%).
 - (2) Selective clearing, to the extent necessary to locate the use, of up to 25 percent of forestal areas on existing slopes of fifteen (15) to 25 percent.
 - (3) No clearing of existing slopes greater than 25 percent except the minimum necessary to locate the use.
 - (4) The limits of land disturbing activities shall be reduced by fifty percent (50%) in the following soil conditions associated with major groundwater recharge areas: soil mapping units 27, 48, 50, 52, 54, 55 and 89.
- (B) On lots in sensitive areas containing ten (10) acres or less, no more than one (1) acre of land disturbing activity shall be permitted, exclusive of house, driveway, drainfield and well. On lots containing more than ten (10) acres, land disturbing activities shall not exceed ten percent (10%) of the lot exclusive of house, driveway, drainfield and well. In addition to the above area constraints, in areas where the existing slope is over fifteen percent (15%), land disturbing activity limits shall be reduced by fifty percent (50%) and shall be permitted only after the applicant has demonstrated that no suitable alternative locations exist on areas with existing slopes less than fifteen percent (15%). In all such cases, a grading plan shall be submitted to demonstrate methods of minimizing the extent of erosion.
- (C) No land disturbing activity shall be permitted on soil mapping units 59 or 88 except for access roads and drives when no alternatives exist.
- (D) Prior to any land disturbing activity on existing slopes of 25 percent or more, or in soil mapping units 27, 59, 88 or 89, the applicant shall provide a Type I Preliminary Soils Review concurrent with zoning permit application. The review shall follow the procedures found in The Loudoun County Facilities Standards Manual.
- (E) No land disturbing activities shall be permitted within 100 feet of springs.
- (F) Prior to any land disturbing activity, the applicant shall provide a sketch plan which shows how the disturbed area will be restored; including existing and proposed slope contour and ground cover.

4-1605

Performance Standards in Highly Sensitive Areas. Land disturbing activity in Highly Sensitive Areas of the Mountainside Development Overlay District shall comply with the following criteria in addition to the standards set forth in Section 4-1604. Where there is a conflict between these sections, the more restrictive standard shall apply.

- (A) Roads, drives, and dwellings shall not be placed on existing slopes greater than 25% or placed in Soil Mapping Unit 59 without a geotechnical study approved by the Department of Building and Development.
- (B) The centerline grade of private roads and drives shall not exceed 16%. Under drainage and culvert design shall conform to the requirements of the Loudoun County Facilities Standards Manual.
- (C) Land disturbing activities, exclusive of utility easements, such as clearing and grading shall be minimized, but shall be allowed as necessary for building sites and related improvements, not to exceed one (1) acre, exclusive of house, driveway, drainfield and well, and existing cleared areas and shall require a grading permit. Special exception conditions limiting clearing may include, but are not limited to:
 - (1) Selective clearing up to a maximum 50% of existing forest areas on existing 0-15% slopes.
 - (2) Selective clearing up to a maximum 25% of existing forest areas on existing 15-25% slopes; and
 - (3) Minimal clearing for roads and drives on existing slopes of greater than 25%.
- (D) Standards and criteria set out in Sections 4-1605(A), (B), and (C) may be modified by Special Exception procedures set forth in Section 6-1300 provided that the application satisfies the public purpose of those standards and criteria to an equivalent degree.
- (E) Where a site is to be served by groundwater, a proven supply approved by the County Health Department shall be provided as follows:
 - (1) **Existing lots.** Prior to issuance of a zoning permit.
 - (2) **Lots created after the effective date of this Ordinance.** Prior to approval of a record plat.

- (F) Such other standards which are relevant, including Section 6-1310 Issues for Consideration and Section 1-102, Purposes of Zoning.

4-1606

Procedures.

- (A) **Permitted Uses.** Application for approval of a location clearance permit shall be made to the Department of Environmental Resources prior to or concurrent with the initial submission for approval of a zoning permit, subdivision, or site plan application.
- (1) **Single Family Dwellings on Existing Lots.** Application for approval of a location clearance permit shall be made concurrent with the initial submission for approval of a Zoning Permit. No Zoning Permit shall be issued unless the location clearance permit has been approved.
- (2) **Additions to Existing Single Family Dwellings.** Application for approval of additions to single family dwellings, existing as of October 4, 1995 within highly sensitive areas, shall apply for approval of a location clearance permit concurrent with the initial submission for approval of a Zoning Permit. No Zoning Permit shall be issued unless a locational clearance, confirming compliance with the standards in Section 4-1604 and 4-1605, has been approved.
- (3) **Preliminary Subdivision Plans and Preliminary Site Plans.** An application for preliminary subdivision or preliminary site plan within the MDOD shall clearly identify the portion of the site within the MDOD and the location of springs, steep slopes, moderately steep slopes, somewhat sensitive, sensitive and highly sensitive areas, soil mapping units 27, 59, & 88, forest cover, along with the existing and proposed building sites, roads, driveways, drainfields, wells, and limits of clearing and grading. A note should be placed on that plan that also identifies the acreage of land proposed to be disturbed by clearing and grading on each proposed lot. The preliminary subdivision or site plan shall be approved only if the County determines that the preliminary plan is in compliance with the performance standards listed in Section 4-1604 of this ordinance.
- (B) **Special Exceptions.** Application for special exceptions shall be submitted prior to or concurrently with the initial submission for approval of a subdivision or site plan proposing land disturbing activity in a Highly Sensitive Area. If the proposed use or structure does not require the subdivision of land or the approval of a site plan, but involves land disturbing activity in a Highly Sensitive Area, a special exception must be applied for separately. Applicable permits shall not be issued until approval of a special exception application. Special exception

applications shall be made and processed in accordance with the provisions of Section 6-1300 of this ordinance.

In addition to the requirements for a special exception application established in Section 6-1300 of this ordinance, the following information must be submitted:

- (1) Existing conditions map, prepared at a scale of 1 inch = 200 feet and including planimetric detail with 5 foot contour intervals. This map shall include the location of existing wells, drainfields, and springs within 100 feet of the property boundary to the extent available from existing records.
- (2) Concept plan of proposed development including proposed roads, lot lines, buildings, wells, drainfield location, and limits of clearing, grading or other land disturbing activity.
- (3) Soil map approved by the Department of Environmental Resources.
- (4) Removed pursuant to ZOAM 1993-0002.

1 **Section 4-1900—Limestone Conglomerate Overlay District (LOD)**

2
3 **4-1901—Purpose and Intent.** A large area just east of the Catoctin Mountain
4 range in the Rural Policy Area of Loudoun County is comprised of
5 limestone and "Karst terrain" areas. The limestone geology of
6 carbonate deposits is dissolved over time by mildly acidic
7 precipitation, creating fissures. The deposits are highly permeable,
8 allowing surface water to pass through quickly to underlying aquifers
9 and groundwater, and to reappear elsewhere as springs. The terrain is
10 also characterized by the presence of certain natural features, such as
11 sinkholes and rock outcrops. Thus, development on Karst terrain has a
12 direct correlation to the potential for collapse and ground slippage and
13 the susceptibility of groundwater and surface water pollution, and
14 spring contamination, posing serious risks to public health, safety, and
15 welfare. The provisions of this Section 4-1900 are intended to regulate
16 land use and development in areas underlain by limestone and in areas
17 with Karst features and Karst terrain in such a manner so as to:

18 (A) — Protect groundwater and surface water resources from
19 contamination;

20 (B) — Reduce potential for property damage resulting from
21 subsidence or other earth movement; and

22 (C) — Protect the health, safety, and welfare of the public.

23 **4-1902—Authority.** Authority for these provisions includes:

24 (A) — Chapter 11, Title 15.2, Code of Virginia (Planning,
25 Subdivision of Land and Zoning).

26 (B) — Soil Conservation Districts Law, Va. Code Sections 21-2(e),
27 21-2(d).

28 (C) — Virginia Environmental Quality Act, Va. Code Section 10-
29 178.

30 (D) — Erosion and Sediment Control Act, Va. Code Section 21-
31 89.2.

32 **4-1903—Applicability and Exemptions.**

33 (A) — **Applicability—Land Area and Features Included in the**
34 **LOD.** This Section 4-1900 shall apply to all land area and
35 karst features included in the Limestone Conglomerate
36 Overlay District (LOD), as shown on the official Limestone
37 Conglomerate Overlay District Map of Loudoun County

1 (~~"LOD Map"~~), which with all explanatory matter thereon, is
2 hereby incorporated by reference.

3 (1) ~~The LOD Map delineates the following features:~~

4 (a) ~~The extent of the limestone bedrock~~
5 ~~formations;~~

6 (b) ~~Sinkholes; and~~

7 (c) ~~Rock outcrops.~~

8 (2) ~~The LOD Map does not delineate required buffers~~
9 ~~around karst features. (See Section 4-1905 below.)~~

10 (B) ~~Applicability Covered Activities.~~ This Section shall
11 apply to all proposed land disturbing activities, including
12 non-agricultural rural economy uses, new single family
13 development, and subdivision, that occurs within the LOD.
14 Expansion, alteration, or reconstruction of legally existing
15 buildings, structures, and impervious surface areas existing
16 on January 7, 2003 shall not be covered, provided that such
17 alteration does not increase the total footprint of a structure
18 or impervious surface by more than twenty five percent
19 (25%) or 2,000 square feet, whichever is greater.

20
21 (C) ~~Exemptions.~~ The following land disturbing activities shall
22 be allowed within the LOD, subject to the specific limits set
23 forth below:

24 (1) ~~Agricultural Operations.~~ This section shall not
25 apply to agricultural operations located in the LOD
26 that are covered by a Conservation Farm
27 Management Plan, approved by the Loudoun
28 County Soil and Water Conservation District or the
29 U.S. Natural Resources and Conservation Service
30 that includes best management practices, and a
31 Nutrient Management Plan (where applicable).
32 Structures associated with agricultural operations
33 are not exempt from these provisions.

34 (2) ~~Existing Legal Lots within Sensitive Limestone~~
35 ~~Areas.~~ Following a Geotechnical or Geophysical
36 study, a legal lot of record, which lot was: (a) in
37 existence on January 7, 2003; and (b) contains in
38 whole or in part a sensitive environmental resource
39 associated with limestone bedrock area established
40 by Section 4-1905, below, may be developed for a

1 single family detached dwelling and permitted
2 accessory structures. To the maximum extent
3 feasible, no development shall take place within
4 karst feature buffers, but where residential
5 development takes place, such dwelling shall be
6 sited on the lot as far from any karst feature as
7 possible, and shall comply with the development
8 standards in this section to the maximum extent
9 feasible. Development on such lot shall not be
10 allowed if subsidence poses a serious risk to public
11 health or safety or to the safety of residents or users
12 of the proposed development, as determined by the
13 County

14 ~~4-1904~~ **Review Procedures.** All development approvals, review procedures,
15 modifications, and density calculations in the LOD are governed by
16 Article VI, "Development Process and Administration," as applicable,
17 and procedures in Chapter 8 of the Facilities Standards Manual (FSM).

18 ~~4-1905~~ **Establishment of Sensitive Limestone Areas.**

19 (A) ~~Sensitive Environmental Resources Associated with~~
20 ~~Limestone Bedrock.~~ For all development applications
21 involving properties subject to LOD as identified on the LOD
22 Map, or by an approved Preliminary Soils Review, the
23 applicant shall submit a Geotechnical or Geophysical Study
24 in accordance with standards set forth in the Facilities
25 Standards Manual, Chapter 6. Such Geotechnical or
26 Geophysical Study shall identify the following sensitive
27 environmental resources associated with limestone bedrock:

- 28 (1) ~~Closed depressions;~~
29 (2) ~~Open sinkholes;~~
30 (3) ~~Rock outcrops;~~
31 (4) ~~Seasonal high water table indicators;~~
32 (5) ~~Surface drainage into ground;~~
33 (6) ~~Faults;~~
34 (7) ~~Other hazardous subsidence conditions;~~
35 (8) ~~Underground solution channels; and~~

(9) ~~Other underground features that may affect the proposed development.~~

(10) ~~Cave openings~~

~~If conditions warrant mitigation to protect sensitive environmental resources associated with limestone bedrock, then the study shall propose mitigation measures to be undertaken. Avoidance of sensitive environmental resources associated with limestone bedrock and of karst features shall be the preferred mitigation measure.~~

(B) ~~Karst Feature Buffers. For each karst feature identified on the LOD Map or by an approved Preliminary Soils Review, or the required Geotechnical/Geophysical Study, a Karst Feature Buffer shall be established from the outermost edge of the feature. The minimum Karst Feature Buffer width shall be:~~

(1) ~~Fifty (50) feet from any rock outcrop;~~

(2) ~~One hundred (100) feet from the rim of any sinkhole; and~~

(3) ~~One hundred (100) feet from any cave opening.~~

~~4-1906 Permitted Uses and Activities.~~

(A) ~~Uses and Activities within Karst Feature Buffers.~~

(1) ~~Land disturbing activities, development, and impervious surface coverage are prohibited within Karst Feature Buffers, except for the following:~~

(a) ~~Fences that do not obstruct surface water flow;~~

(b) ~~Trails and other passive recreation facilities, excluding buildings, for pedestrian, bike or other non-motorized use, provided that such facility is designed with permeable materials and is located a minimum of 25 feet from the edge of a karst feature; and~~

(c) ~~Restoration and revegetation.~~

(2) ~~Residential structures shall be located outside Karst Feature Buffers, unless there are no feasible~~

development sites available outside the buffers. Residential structures located within a Karst feature shall be sited on the lot as far away from the Karst feature to the maximum extent feasible.

~~(B) — Uses and Activities in the Limestone Conglomerate Overlay District, Outside Karst Feature Buffers. All uses and structures permitted by right in the underlying zoning district are permitted within the Limestone Conglomerate Overlay District outside of Karst Feature Buffers, subject to the standards and mitigation measures in this Section and Zoning Ordinance.~~

~~4-1907 — Special Exception Uses. All uses and structures permitted by special exception in the underlying zoning district may be permitted subject to the procedures and criteria stated in Section 6 1300, "Special Exception," of the Zoning Ordinance, to conditions identified in a grading permit application, when required, and to any mitigation measures required according to Section 4 1909, below~~

~~4-1908 — Development Standards for the LOD. Unless otherwise exempt by Section 4 1903(C) above, all land disturbing activities permitted by right or special exception in the LOD shall adhere to the following development standards:~~

~~(A) — Structures in Potential Subsidence Areas. No structure shall be built in an area where a Geotechnical or Geophysical Study indicates that potential subsidence may occur that would cause physical injury or harm to the public or future residents unless such a study indicates that such potential harm can be mitigated.~~

~~(B) — Site Grading. To the maximum extent feasible, site grading shall maintain natural drainages. If not feasible, then drainage shall be designed to avoid damage to sensitive environmental resources associated with limestone bedrock as identified in the required Geotechnical or Geophysical study.~~

~~(C) — Surface Water Run-Off.~~

~~(1) — Non-point source pollution load of nutrients and sediment shall not exceed the standards specified in Chapter 5 of the Facilities Standards Manual.~~

~~(2) — Surface water run-off shall not be redirected to enter a sinkhole or closed depression. Drainage plans shall be designed to route surface water run-~~

1 off through vegetative filters or other filtration
2 measures before it enters such features, and to
3 protect neighboring properties from runoff on the
4 subject property.

5 ~~(D) — **Revegetation.** Disturbed areas not covered by paving, stone,~~
6 ~~or other solid materials shall be revegetated with native plant~~
7 ~~species that are compatible with the natural vegetation and~~
8 ~~tree cover and that have low water and nutrient requirements.~~

9 ~~(E) — **Application of Wastewater Sludge.** Application of~~
10 ~~wastewater sludge shall be subject to the requirements of a~~
11 ~~nutrient management plan acceptable to the County pursuant~~
12 ~~to provisions contained in the Loudoun County Codified~~
13 ~~Ordinances~~

14 ~~(F) — **Communal Water and Wells.** Wells shall be installed in~~
15 ~~accordance with the provisions in Chapter 6 (proposed) of the~~
16 ~~Facilities Standards Manual, relating to "Subdivisions with~~
17 ~~Communal Water Systems," and "Subdivisions with~~
18 ~~Individual Wells." In addition to well protection standards in~~
19 ~~the FSM, structures and septic systems shall be located a~~
20 ~~minimum distance of 100 feet from all existing and proposed~~
21 ~~wells, both on and off site.~~

22 ~~(G) — **On-Site Sewage Disposal Systems.** On site sewage disposal~~
23 ~~systems, as currently defined in the Land Subdivision~~
24 ~~Development Ordinance, are allowed for individual lots and~~
25 ~~subdivisions with fewer than eight (8) lots in the LOD.~~
26 ~~Sewage disposal systems shall be subject to the review~~
27 ~~processes and requirements in the existing LSDO (Section~~
28 ~~1245.10) and shall comply with requirements of the State of~~
29 ~~Virginia Department of Health Division of Sewage and~~
30 ~~Water Services, the Loudoun County Sanitation Authority~~
31 ~~regulations, the Loudoun County Health Department, and the~~
32 ~~following:~~

33 ~~(1) — Within the LOD, in areas that the Director of the~~
34 ~~Loudoun County Health Department deems~~
35 ~~appropriate for sewage disposal systems, the~~
36 ~~applicant shall only use a sewage disposal system~~
37 ~~that is at least 90% effective in removing nitrogens.~~

38 ~~(2) — For existing and new systems, owners shall submit~~
39 ~~evidence of pumping, inspection, and any necessary~~
40 ~~repairs and maintenance every three years. The~~
41 ~~applicant shall submit evidence of current~~

inspection and maintenance before expansion or conversion of a land use.

(H) ~~Communal Wastewater Systems.~~ Proposed subdivisions containing eight (8) or more lots shall be served by communal wastewater systems, unless the applicant demonstrates to the County that other types of systems are available that will achieve the same or superior treatment results. The County shall allow communal wastewater systems in the LOD subject to the following standards:

(1) ~~Where sufficient buildable land area exists on the portion of a property outside the LOD to accommodate a proposed communal wastewater disposal system, that area shall be used before any land within the LOD shall be used; or~~

(2) ~~Where insufficient buildable land area exists outside of the LOD, as much of the proposed communal wastewater disposal system shall be sited outside the LOD as possible.~~

(3) ~~Where any portion of a proposed communal wastewater disposal system is to be located within the LOD the applicant shall demonstrate through a Geophysical Study acceptable to the County that the communal wastewater disposal system will minimize run-off generated, enhance filtration, and will not have an adverse environmental impact on underlying aquifers and groundwater. In addition, the applicant shall provide a plan for regular operation and maintenance.~~

(I) ~~Protection of Springs.~~ Land disturbing activities, development, and impervious surface coverage are prohibited within one hundred (100) feet from a spring, measured from the vertical source of a spring on flat terrain or from the first emergence of a spring on any steep slope (15% or greater).

(J) ~~Stormwater Management Ponds.~~

(1) ~~To the maximum extent feasible, stormwater management ponds shall not be located within areas containing open sinkholes and closed depressions.~~

(2) ~~Stormwater management ponds constructed within the LOD shall be lined with impervious materials to~~

prevent groundwater pollution, in accordance with Chapter 5 of the Facilities Standards Manual.

(K) ~~Warnings to Property Owners.~~ A note shall be placed on any record subdivision plat for land in the LOD, containing the following, or similar, language: "Household lawn fertilizers, herbicides, and pesticides for residential purposes should be limited due to the underlying geology of this property, and the potential for groundwater contamination. Application of fertilizers and lime is allowed within the Limestone Conglomerate Overlay District but should only be applied based on results of a soil test obtained through the Virginia Tech extension service or other County approved laboratory."

~~4-1909 Mitigation Measures for the LOD.~~ In addition to compliance with the development standards in Section 4 1908, land disturbing activities shall employ one or more measures as necessary to mitigate any potential adverse impacts to the County's subsurface water resources or sensitive environmental resources associated with limestone bedrock, as identified in a preliminary soils review, required Geotechnical or Geophysical Study as set forth in Section 4 1905(A), or other hydrogeologic or environmental analysis;

(A) ~~General.~~ Mitigation measures shall be directly related to the proposed land disturbing activity and its potential adverse impact on karst features or sensitive environmental resources associated with limestone bedrock identified on the subject property.

(B) ~~Mitigation Measures.~~ If warranted by a study required by this Zoning Ordinance, the County shall require measures to mitigate the identified potential adverse impacts, including but not limited to the following:

(1) ~~Ineligibility for Density Increases.~~ The applicant may not be eligible for any density increases permitted under the clustering provisions of this Ordinance.

(2) ~~Use of a Cluster Subdivision.~~ Where not otherwise required by this Ordinance, the County may require cluster development.

(3) ~~Landscaping and Reductions in Impervious Surface Coverage.~~ The County may require:

- (a) ~~Reductions in the maximum impervious surface coverage allowed;~~
- (b) ~~Reductions in the area devoted to landscaped lawns, and~~
- (c) ~~the use of xeriscape (i.e., use of native plant materials and landscape materials that have lower water and nutrient requirements).~~
- (4) ~~**Prohibition of Specific Pollution Sources.** The County may prohibit specific pollution sources, as defined in Chapter 5 of the Facilities Standards Manual if the applicant does not propose effective mitigation measures acceptable to the County, provide evidence that pollution sources will be properly monitored, and that they will adhere to facility design standards.~~
- (a) ~~The County may prohibit the following pollution sources, including, but not limited to:~~
- (i) ~~Uses and activities involving hazardous substances;~~
- (ii) ~~Uses and activities involving the application of high nitrate herbicides or pesticides;~~
- (iii) ~~Automobile service stations;~~
- (iv) ~~Underground storage tanks;~~
- (v) ~~Landfills and waste sites; and~~
- (vi) ~~Other uses and activities with high risk of releasing pollutants.~~
- (5) ~~**Storage Tanks.** The County may require leak testing and secondary containment of storage tanks.~~
- (6) ~~**Conservation of Indigenous Vegetation.** The County may require retention of indigenous vegetation to the maximum extent feasible, and in accordance with Tree Conservation Standards in Chapter 7 of the Facilities Standards Manual.~~
- (7) ~~**Groundwater Monitoring.** The County may require the applicant to establish a regular system of groundwater monitoring by a qualified professional for the proposed development.~~

1 **Section 4-2000—River and Stream Corridor Overlay District (RSCOD)**

2
3 ~~4-2001 Purpose and Intent.~~ These provisions are intended to promote, preserve, and
4 enhance the important hydrologic, biological, ecological, aesthetic, recreational,
5 and educational functions that river and stream corridors provide. Specifically,
6 the provisions are intended to:

7 (A) ~~Protect life and prevent or minimize property damage from soil erosion~~
8 ~~and flooding; and reduce public costs for flood control, rescue, and relief~~
9 ~~efforts occasioned by unwise use or occupancy of floodplains;~~

10 (B) ~~Comply with federal and state laws and regulations that address the need~~
11 ~~for floodplain management and protection;~~

12 (C) ~~Qualify Loudoun County residents for the insurance and subsidies~~
13 ~~provided by the National Flood Insurance Program;~~

14 (D) ~~Conserve the natural state of watercourses and stream banks to enable a~~
15 ~~dynamic and healthy river and stream corridor ecosystem;~~

16 (E) ~~Maintain water quality and minimize or remove pollutants delivered in~~
17 ~~stormwater through the natural capacity of riparian areas to filter and~~
18 ~~purify run-off;~~

19 (F) ~~Protect against the damages of soil erosion and flooding;~~

20 (G) ~~Reduce water treatment cost;~~

21 (H) ~~Maintain and provide a riparian canopy to shade streams and promote~~
22 ~~desirable aquatic organisms and fish habitats;~~

23 (I) ~~Conserve wildlife habitat and corridors;~~

24 (J) ~~Perpetuate biological diversity and natural resource management to~~
25 ~~provide educational and recreational value;~~

26 (K) ~~Protect and preserve functioning forest cover and riparian forest buffers~~
27 ~~for their biological and hydrological benefits;~~

28 (L) ~~Protect wetlands;~~

29 (M) ~~Preserve and protect Loudoun County's historic and prehistoric heritage in~~
30 ~~the form of archeological sites; and~~

31 (N) ~~Protect the scenic value of the rivers and streams of Loudoun County.~~

32
33 ~~4-2002 Authority.~~ Authority for these provisions includes:

- (A) ~~Flood Damage Reduction Act, Va. Code Sections 62.1-44.108 et seq.~~
- (B) ~~Chapter 11, Title 15.2, Code of Virginia (Planning, Subdivision of Land and Zoning).~~
- (C) ~~Soil Conservation Districts Law, Va. Code Sections 21-2(c), 21-2(d).~~
- (D) ~~Virginia Environmental Quality Act, Va. Code Section 10-178.~~
- (E) ~~Erosion and Sediment Control Act, Va. Code Section 21-89.2.~~
- (F) ~~Potomac River Basin Compact, Va. Code Section 62.1-69.1.~~
- (G) ~~National Flood Insurance Act of 1968, 42 U.S.C. 4001 et seq.~~
- (H) ~~Section 10.1-2100 et seq. (The Chesapeake Bay Preservation Act) and Section 15.1-489, of the Code of Virginia.~~

~~4-2003 Applicability and Exemptions.~~

- (A) ~~**Applicability—Land Area & Features Included in the RSCOD.** This Section 4 2000 shall apply to all land areas and natural features within the River and Stream Corridor Overlay District (RSCOD), as shown on the official River and Stream Corridor Overlay District Map of Loudoun County ("RSCOD Map"), which with all explanatory matter thereon, is hereby incorporated by reference. The description of the Protected River and Stream Corridors ("Protected Corridors") in RSCOD is set forth in Section 4 2005, "Establishment of Protected Corridors." (Note: Map sources are listed on RSCOD Map.)~~
- (B) ~~**Applicability—Covered Activities.** This Section 4 2000 shall apply to all proposed land disturbing activity, including new single-family development and subdivision that occurs within the RSCOD Protected River and Stream Corridors ("Protected Corridors"). This Section shall not apply to the expansion, alteration, or reconstruction of legally existing buildings, structures, and impervious surface areas existing on January 7, 2003, provided that such alteration does not increase the total footprint of a structure or impervious surface by more than twenty five percent (25%) or 2000 square feet whichever is greater.~~
- (C) ~~**Exemptions.** The following land disturbing activities are exempt from this Section 4 2000's requirements, subject to the specific limits set forth below:~~
- (1) ~~**Agricultural Operations.** This section shall not apply to agricultural operations located in the Protected Corridor that are covered by a Conservation Farm Management Plan, approved by the Loudoun County Soil and Water Conservation District or the~~

U.S. Natural Resources and Conservation Service that includes best management practices. Structures associated with agricultural operations are not exempt from these provisions.

(2) ~~Existing Legal Lots within the Protected Corridor.~~ A legal lot of record (a) in existence on January 7, 2003; and (b) located in whole or in part within the Protected Corridor, may be developed for a single family detached dwelling use and accessory structures, provided such dwellings and structures are located outside of the 100 year floodplain. This exemption shall not apply to non-residential uses. Such dwelling and accessory structures shall be sited on the lot as far from the stream bank as feasible.

(3) ~~Man-Made Drainage Channels, Ditches, and Similar Structures.~~ Standards set forth in Section 4 2005, "Establishment of Protected Corridors," shall not apply to man made drainage channels, ditches, and similar structures. However, all other relevant development standards set forth in Section 4 2008 shall apply.

(D) ~~Zone District Development and Dimensional Standard Flexibility Provisions.~~ When twenty five percent (25%) or more of the total area of a parcel or lot is subject to RSCOD restrictions (excluding any management buffer), the following modifications of development and dimensional standards shall be applicable for the purposes of accommodating the density/intensity of development allowed in the underlying zoning district, unless the underlying zoning requires less restrictive standards:

(1) ~~Minimum Lot Size:~~ No minimum.

(2) ~~Minimum Lot Width:~~ No minimum.

(3) ~~Minimum Yards.~~

(a) ~~Residential:~~ No minimum

(b) ~~Nonresidential:~~

(i) ~~Front.~~ 15 feet

(ii) ~~Side.~~ 9 feet

(iii) ~~Rear.~~ 15 feet

(4) ~~Height.~~ 45 feet (residential); 55 feet, without additional setbacks being required (nonresidential)

1 ~~(5) — Parking (nonresidential only). — Twenty five percent (25%)~~
2 ~~reduction in the required off street parking space requirement as~~
3 ~~set forth in Section 5 1002.~~

4 ~~(6) — Buffering and Screening. — To the extent necessary to~~
5 ~~accommodate the density/intensity of development allowed in the~~
6 ~~underlying zoning district, the Zoning Administrator may waive or~~
7 ~~reduce the buffer yard requirements set forth in Section 5 1400~~
8 ~~upon a showing that the building and/or yard has been designed to~~
9 ~~minimize adverse impact through a combination of architectural,~~
10 ~~landscape, and/or other design techniques.~~

11
12
13 ~~4-2004 Review Procedures. — All development approvals, review procedures,~~
14 ~~modifications, and density calculations in the RSCOD are governed by Article VI,~~
15 ~~“Development Process and Administration,” as applicable, and procedures in~~
16 ~~Chapter 8 of the Facilities Standards Manual.~~

17 ~~4-2005 Establishment of Protected Corridors.~~

18 ~~(A) — General Rule Protected Corridors along Streams and Rivers.~~

19 ~~(1) — Minimum Protected Corridor Width. — Except for those waters~~
20 ~~listed under section 4 2005(B)(1) below, for all stream and river~~
21 ~~segments draining 100 acres or more and shown on the RSCOD~~
22 ~~Map, the Protected Corridor shall be the greater of (1)(a) or (1)(b)~~
23 ~~below:~~

24 ~~(a) — The cumulative width of the following:~~

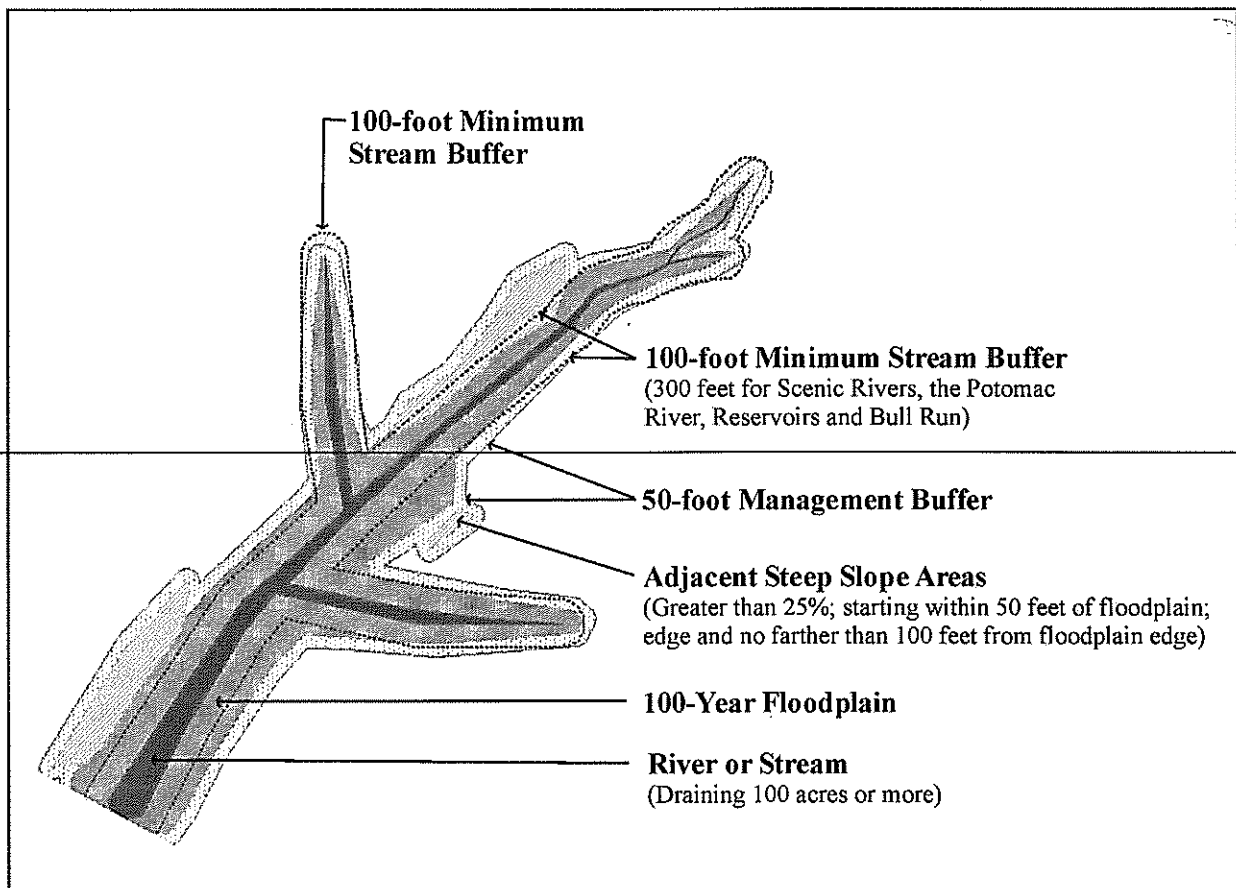
25 ~~(i) — The 100 year floodplain, and~~

26 ~~(ii) — Adjacent very steep slopes (greater than 25%)~~
27 ~~starting within 50 feet of the edge of the 100 year~~
28 ~~floodplain and extending no greater than 100~~
29 ~~horizontal feet beyond the edge of the 100 year~~
30 ~~floodplain, and~~

31 ~~(iii) — A 50 foot Management Buffer measured from the~~
32 ~~edge of the 100 year floodplain in (a)(i) above or~~
33 ~~when adjacent very steep slopes are present, from~~
34 ~~the very steep slope areas in (a)(ii) above.~~

35 ~~OR~~

36 ~~(b) — A minimum stream buffer measured as the area located~~
37 ~~within 100 feet of both sides of the stream or river,~~
38 ~~measured as a line extending perpendicularly from the~~
39 ~~stream bank of the active channel of the stream or river.~~



Protected River and Stream Corridor ("Protected Corridor") Diagram

(B) Protected Corridors Along Specific Rivers/Streams and Water Supply Reservoirs

(1) Minimum Protected Corridor Width. For the following specific rivers and streams and water supply reservoirs, the Protected Corridor shall be the greater of the Protected Corridor width required by Subsection 4-2005(A), "General Rule Protected Corridors along Streams and Rivers," above, or the area located within three hundred (300) feet from:

- (a) The defined stream bank of the Potomac River;
- (b) The defined stream bank of Bull Run;
- (c) The stream bank of the active channel for any state scenic rivers, including but not limited to Goose Creek, Catoctin Creek; and
- (d) The projected shoreline of any drinking water supply reservoir, as denoted on the RSCOD map.

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1 **4-2006 Permitted Uses and Activities.**

2 ~~(A) General. Only those uses and activities set forth in this subsection shall~~
3 ~~be permitted by right or special exception within a Protected Corridor, and~~
4 ~~land so encumbered may be used in a manner permitted in the underlying~~
5 ~~district only if and to the extent such use is also permitted in the overlay~~
6 ~~district.~~

7 ~~(B) Permitted Uses. The following uses shall be permitted in a Protected~~
8 ~~Corridor, subject to development standards in this section:~~

9 ~~(1) Roads, railroad tracks, bridges, paths and trails, and below ground~~
10 ~~utilities when any such facilities cross a stream or river;~~

11 ~~(2) Paths and trails, including footpaths, bicycling or hiking paths, and~~
12 ~~horse trails constructed of permeable materials;~~

13 ~~(3) Stormwater management facilities that do not alter a river or~~
14 ~~stream channel;~~

15 ~~(4) Sanitary sewer pipelines;~~

16 ~~(5) Lakes, ponds, and water supply reservoirs;~~

17 ~~(6) Historic sites, structures, archaeological sites, and~~
18 ~~restoration/recovery activities;~~

19 ~~(7) Passive recreation, limited to hiking, non motorized biking,~~
20 ~~horseback riding, picnicking, camping, climbing, hunting, fishing,~~
21 ~~and wildlife viewing;~~

22 ~~(8) Active recreation on the waters only, limited to swimming and~~
23 ~~non powered boating with public points of entry identified and~~
24 ~~approved by the County;~~

25 ~~(9) Silviculture, as defined in the Zoning Ordinance;~~

26 ~~(10) Wildlife and fisheries management projects that are consistent with~~
27 ~~the purposes of the Federal Endangered Species Act or consistent~~
28 ~~with the regulations, policies, and habitat programs of the~~
29 ~~Commonwealth of Virginia;~~

30 ~~(11) Conservation and educational activities, including but not limited~~
31 ~~to Adopt a Stream and Keep Loudoun Beautiful programs,~~
32 ~~teaching visits, and scientific study of nature, historic sites, and~~
33 ~~archaeological sites;~~

34 ~~(12) Stream and riparian restoration projects;~~

(13) ~~Wetlands mitigation banking; and~~

(14) ~~Water quality monitoring and stream gauging.~~

4-2007 Special Exception Uses.

(A) ~~General.~~ The following uses may be permitted in a Protected Corridor by special exception, subject to the procedures and criteria stated in Section 4-2008, "Development Standards," and Section 6-1300, "Special Exception:"

(1) ~~Marinas or boat launches for non-powered boats, boat rental entry points, docks and piers; and~~

(2) ~~Above-ground structures or uses required for the operation of a public utility, such as intake and outfall structures of power plants, sewage treatment plants, water treatment plants, and substations.~~

(B) ~~Additional Criteria for a Special Exception Use.~~ In considering applications for a special exception, the Board of Supervisors shall find that the following standards, in addition to those of Section 6-1300, "Special Exception," have been met:

(1) ~~The proposed use will not increase the danger to life and property due to increased flood heights or velocities.~~

(2) ~~The proposed use will not increase the danger that materials may be swept downstream to the injury of others.~~

(3) ~~The proposed water supply and sanitation systems are designed to prevent disease, contamination, and unsanitary conditions.~~

(4) ~~The proposed use or structure must be located and designed to limit its susceptibility to flood damage, and alternative locations that are not subject to flooding must be considered.~~

(5) ~~The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters expected at the site shall not cause significant damage, nor increase erosion downstream due to increased flood heights or velocities.~~

(6) ~~The proposed use will not adversely affect water quality or impair the function or chemical, physical, biological, and ecological integrity of the stream or river corridor.~~

4-2008 Development Standards. All development and land disturbing activities permitted by right or special exception in the RSCOD Protected Corridor shall adhere to the following development standards:

1 ~~(A) General. To the maximum extent feasible, all uses and activities shall~~
2 ~~minimize land disturbance in the Protected Corridor.~~

3 ~~(1) Preferred Development Sites. Preferred development sites for~~
4 ~~permitted uses and activities set forth in Section 4 2006 and special~~
5 ~~exception uses set forth in Section 4 2007 are those that:~~

6 ~~(a) Avoid all parts of the Protected Corridor except to the~~
7 ~~extent that the Management Buffer is reduced or eliminated~~
8 ~~pursuant to Section 4 2009, "Permitted Reductions in~~
9 ~~Protected Corridor Width;"~~

10 ~~(b) Do not impair, interrupt, or fragment the functioning of the~~
11 ~~river and stream ecology; and protect the safety of residents~~
12 ~~and their property.~~

13 ~~(2) Restoration/Mitigation of Disturbance.~~

14 ~~(a) Disturbance During Development. All areas~~
15 ~~disturbed during development in the Protected~~
16 ~~Corridor shall be restored to preexisting conditions~~
17 ~~by the applicant to the maximum extent feasible.~~
18 ~~Where restoration will not be feasible, then the~~
19 ~~applicant shall mitigate any disturbance of the~~
20 ~~Protected Corridor that exceeds 10,000 square feet~~
21 ~~in area by providing mitigation in other areas in the~~
22 ~~Protected in the form of:~~

23 ~~(i) Providing riparian buffer pursuant to~~
24 ~~Chapter 7 of the FSM, either on the~~
25 ~~development site or off site; or~~

26 ~~(ii) Enhanced BMPs pursuant to Chapter 5 of~~
27 ~~the FSM, either on the development site or~~
28 ~~off site; or~~

29
30 ~~(iii) Stabilization of off site stream banks; or~~

31
32 ~~(iv) Off site vegetation restoration of erosion~~
33 ~~that is affecting water quality; or~~

34
35 ~~(v) Establishment of a restoration area equal in~~
36 ~~quality and quantity of the area encroaching~~
37 ~~into the 50 foot management buffer~~
38 ~~elsewhere on the lot or parcel in a way that~~
39 ~~maximizes the purpose and intent of the~~
40 ~~protected corridor.~~

1
2 All mitigation areas shall be located in the general
3 vicinity of the disturbed area (e.g., within the
4 immediate drainage area) and shall be similar in
5 size and quality as the disturbed area prior to
6 development activity.

7
8 (b) ~~Pre-existing Conditions.~~ On site stream bank stabilization
9 and vegetation restoration shall be required if a site shows
10 evidence of pre-existing erosion that is affecting water
11 quality and/or stream banks that are unstable. Restoration
12 shall be performed in accordance with Chapter 7 of the
13 Facilities Standards Manual.

14
15 (B) ~~Alterations to the 100-Year Floodplain.~~ No alterations shall occur in the
16 100-year floodplain to create additional buildable land by elevating land or
17 relocating or altering a natural stream channel, except as specifically
18 allowed as either a permitted or special exception use. Where alterations
19 are permitted, they shall be pursuant to the provisions in this Section 4-
20 2000, and the following criteria:

21
22 (1) ~~Alterations to the floodplain shall result in no off site increase in~~
23 ~~the water surface elevation of the base flood. Alterations in the~~
24 ~~floodway shall result in no rise in the water surface elevation of the~~
25 ~~base floodplain consisting of the water channel and overbank areas~~
26 ~~capable of conveying the deep and fast moving water discharge of~~
27 ~~the base flood as defined in the Federal Emergency Management~~
28 ~~Agency Flood Insurance Study.~~

29
30 (2) ~~Alterations to the floodplain shall not create erosive water velocity~~
31 ~~on or off site (where erosive water velocity is based on analysis of~~
32 ~~the surface material and permissible velocities for specific cross~~
33 ~~sections affected by the proposed alteration, using standard~~
34 ~~engineering tables as a general guide), and the mean velocity of~~
35 ~~stream flow at the downstream end of the site after alteration shall~~
36 ~~be no greater than the mean velocity of the stream flow under~~
~~existing conditions.~~

37
38 (3) ~~The applicant shall provide plans for any alteration to the 100-year~~
39 ~~floodplain. The floodplain alteration plan shall further include~~
40 ~~plans for erosion control of cut and fill slopes and restoration of~~
41 ~~excavated areas. The site plan shall incorporate the use of natural~~
42 ~~materials (earth, stone, wood) on cut and fill slopes and provide for~~
~~tree protection.~~

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